

SYSTEMS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR STORING
AND RETRIEVING PRODUCT AVAILABILITY INFORMATION
FROM A STORAGE CACHE

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ABSTRACT OF THE INVENTION

The present invention provides methods for efficiently handling product
availability queries. The present invention provides a local availability cache that is
prepopulated with product availability listings from various product sources. Customer
product availability queries are processed using the prepopulated availability cache, as
10 opposed to independently querying each product source. The present invention also uses
methods to manage the cache, such as by limiting the length of use data records stored for
each start of use day to a maximum length of use and updating of data in the query using
a function that updates data for start dates of use that occur sooner in time than for start
dates of use that occur later in time. The present invention also uses functions to
15 determine availability for length of use requests that exceed the maximum length of use
stored in the cache by piecing together availability information for smaller lengths of use.

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